

STEPHEN PARKER SINGLETON

4347 Great Oak Dr, N. Charleston, SC 29418
sps253@cornell.edu • 803-669-3481 • [linkedin.com/in/spsingleton/](https://www.linkedin.com/in/spsingleton/)

Education

June 2020 - Present	PhD Candidate in Computational Biology Spec. Computational Neuroscience	Cornell University Ithaca, NY
August 2015 - June 2017	M.S. in Chemistry Spec. Polymer Science	Cornell University Ithaca, NY
August 2011-May 2015	B.S. in Chemistry, ACS Certified <i>Magna Cum Laude</i> , GPA: 3.9	University of South Carolina, Columbia, SC

Professional Experience

June 2020 - Present	NSF Graduate Research Fellow Advisor: Amy Kuceyeski	Department of Computational Biology Cornell University	<ul style="list-style-type: none">Studying the effects of serotonergic compounds on brain activity/connectivity and developing neural-mass whole brain models to drive targeted brain therapy.
August 2017 - June 2020	Teacher High School	Palmetto Scholars Academy North Charleston, SC	<ul style="list-style-type: none">Designed and implemented a diverse 10th grade chemistry curriculum for intellectually gifted studentsAdvisor of students completing their Senior Capstone in Natural Sciences Research.Instructor of dual-enrollment Chemistry 110/111 lecture and lab course along with an Introduction to Research class to prepare junior students for their senior capstone project.Utilized a project-based-learning curriculum for an experimental chemistry elective course.
June 2015 - August 2017	Graduate Research Assistant Advisor: Brett P. Fors	Department of Chemistry & Chemical Biology Cornell University	<ul style="list-style-type: none">Explored the development of novel catalyst systems for controlling polymer topology <i>in situ</i>, utilizing visible light as an external stimulus.Structure-property relationships of these new materials studied via NMR, rheology, and SAXS.
August 2013 - May 2015	Undergraduate Researcher Advisor: Chuanbing Tang	Department of Chemistry & Biochemistry University of South Carolina	<ul style="list-style-type: none">Development and classification of cationic, rosin acid-derived, compounds and polymers as novel antimicrobial agents.Surface initiated ATRP modification of glass surfaces for medical device and implant applications.Novel monomer synthesis and natural product functionalization, purification, and characterization.
May 2013 - August 2014	Applications/Development Chemist Intern I & II	MeadWestvaco (now Ingevity) North Charleston, SC	<ul style="list-style-type: none">Led method development for linking physical property testing values of pressure sensitive adhesives to rheological profiles.Ladder study performed involving HM-PSA formulation and preparation, physical and rheological testing, followed by multivariate analysis to create an iterative screening process for new product development and adhesive formulation.Explored various synthetic pathways for the development of new products with targeted end-use properties in adhesive systems.Characterized new resins for their mechanical property effects and compatibility in styrene block copolymer blends.

Teaching and Outreach

April 2019 - Present	Advisor High School Senior Capstone Experience	Palmetto Scholars Academy North Charleston, SC	<ul style="list-style-type: none">Mentoring high school students interested in scientific research to develop, plan, and perform their thesis research for their Senior Capstone Project.Students carry out hands on research, write a thesis, and defend it against a committee.
----------------------	---	---	--

August 2017 - May 2018	Head Coach VEX High School Robotics	Palmetto Scholars Academy North Charleston, SC
	<ul style="list-style-type: none"> ▪ Coached 4 high school VEX teams during the 2017-2018 In The Zone challenge. ▪ Teams earned 2 Excellence Awards, 2 Design Awards, and 1 Tournament Champions award. ▪ 2 Teams made it to SC State Tournament and 1 team advanced to the US CREATE Open event in Council Bluffs, Iowa. 	
January 2016 - June 2017	Outreach Coordinator	Fors Research Group Cornell University
	<ul style="list-style-type: none"> ▪ Coordinate with local organizations to provide hands-on science activities for children and families, preferably in underserved communities. 	
August 2015 - June 2017	Families Learning Science Together Workshop Volunteer	Cornell Center for Materials Research Cornell University
	<ul style="list-style-type: none"> ▪ Hands-on workshops to encourage children and their parents to explore how materials interact with each other held one Saturday per month at the public library. 	
August 2015 - May 2016	Graduate Teaching Assistant Organic Chemistry Laboratory	Department of Chemistry & Chemical Biology Cornell University
October - November 2015	Family Science Nights Module Instructor	Sciencenter Museum Ithaca, NY
	<ul style="list-style-type: none"> ▪ Hosting demos at rural high schools in the greater-Ithaca area to promote scientific empowerment, curiosity, and education in underprivileged families. 	
January 2013 - May 2013	Teaching Assistant General Chemistry Laboratory	Department of Chemistry & Biochemistry University of South Carolina

Volunteer Experience

October 2016	Service Volunteer	Montgomery Park Playground Build Dryden, NY
	<ul style="list-style-type: none"> ▪ Volunteered time towards a community sponsored playground build through Play By Design 	
September 2013 - June 2015	President and Founder	Gates at Williams-Brice Recycling Committee Columbia, SC
	<ul style="list-style-type: none"> ▪ Established a volunteer-driven program to provide our local community with recycling commodities while stimulating environmental awareness through education. ▪ Held quarterly meetings to discuss logistics challenges and volunteer recruitment. ▪ On average, this committee is responsible for diverting 1,000 gallons of material from the landfills per week. 	
Summers of 2013-2014	Service Volunteer	The Hope Lodge, American Cancer Society Charleston, SC
	<ul style="list-style-type: none"> ▪ Cooked dinner for cancer patients who were provided housing accommodations in The Hope Lodge at the Medical University of South Carolina, an American Cancer Society support program. 	

Honors and Awards

National Science Foundation Graduate Research Fellow — 2016 - present

Graduation with Leadership Distinction in Research — May, 2015 (e-portfolio: <https://sites.google.com/site/spsingletonportfolio/>)

University of South Carolina Outstanding Senior Award — April, 2015

Who's Who Among American Colleges and Universities Award — April, 2015

Hypercube Scholar Award — April, 2015

Hiram S. and Lawanda Allen Scholarship for Excellence in Chemistry — April, 2014

Magellan Scholarship for Undergraduate Research — April, 2014

Outstanding Poster Presentation, Presented at the South Carolina ACS Awards Day — April, 2014

South Carolina Palmetto Fellows Scholar — August, 2011 - May, 2015

USC Dean's Scholar — August, 2011 - May, 2015

Publications

Milena Nadgorny, Dillon T. Gentekos, Zeyun Xiao, S. Parker Singleton, Brett P. Fors, Luke A. Connal “*Manipulation of Molecular Weight Distribution Shape as a New Strategy to Control Processing Parameters,*” *Macromolecular Rapid Communications*, **2017** DOI: 10.1002/marc.201700352

Mitra S. Ganewatta, Kristen P. Miller, S. Parker Singleton, Pegah Mehrpouya-Bahrami, Yung P. Chen, Yi Yan, Mitzi Nagarkatti, Prakash Nagarkatti, Alan W. Decho, Chuanbing Tang “*Antibacterial and Biofilm-Disrupting Coatings from Resin Acid-Derived Materials,*” *Biomacromolecules*, **2015** DOI: 10.1021/acs.biomac.5b01005.

Presentations

S. Parker Singleton “*Chemistry and Music Workshop,*” panel contributor, American Chemical Society National Meeting, Orlando, FL, April **2019**.

S. Parker Singleton; Chuanbing Tang “*Antibacterial and Biofilm-Disrupting Coating Sustainable Materials,*” oral presentation, University of South Carolina Discovery Day for Undergraduate Researchers, Columbia, SC, April, **2015**.

S. Parker Singleton; Chuanbing Tang “*Antibacterial and Biofilm-Disrupting Coating Sustainable Materials,*” oral presentation, 47th holding of the Southeastern Undergraduate Research Conference, Montgomery, AL, February, **2015**.

S. Parker Singleton; Chuanbing Tang “*Sustainable Antimicrobial Coatings from Resin Acids,*” poster presentation, American Chemical Society Awards Day, South Carolina Chapter, Orangeburg, SC, April, **2014**.